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7590 11/17/2004		EXAMINER		
Casey August			MITCHELL, JASON D	
Intellectual Prop	erty Law Dept,	•		
IBM Corporation			ART UNIT	PAPER NUMBER
P.O. Box 218			2124	
Yorktown Heights, NY 10598			DATE MAILED: 11/17/2004	

Please find below and/or attached an Office communication concerning this application or proceeding.



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		Application No.	Applicant(s)					
Office Action Summary		10/073,630	KIMELMAN ET AL.	•				
		Examiner	Art Unit	······				
		Jason Mitchell	2124					
Period fo	The MAILING DATE of this communic or Reply	cation appears on the cover she	et with the correspondence addre	ss				
A SH THE - Exte after - If the - If NO - Failu Any	ORTENED STATUTORY PERIOD FO MAILING DATE OF THIS COMMUNIO nsions of time may be available under the provisions of SIX (6) MONTHS from the mailing date of this commuperiod for reply specified above is less than thirty (30) period for reply is specified above, the maximum starte to reply within the set or extended period for reply reply received by the Office later than three months afted patent term adjustment. See 37 CFR 1.704(b).	CATION. of 37 CFR 1.136(a). In no event, however, munication. ) days, a reply within the statutory minimum rutory period will apply and will expire SIX (6) will, by statute, cause the application to become	nay a reply be timely filed  of thirty (30) days will be considered timely. ) MONTHS from the mailing date of this commitme ABANDONED (35 U.S.C. § 133).	unication.				
Status								
1)⊠	Responsive to communication(s) filed	d on 11 February 2002.						
2a)□	_ * * * * * * * * * * * * * * * * * * *							
3)□	<del>, _</del>							
Disposit	on of Claims							
5)□ 6)⊠ 7)□	Claim(s) 1-11 is/are pending in the ap 4a) Of the above claim(s) is/are Claim(s) is/are allowed. Claim(s) 1-11 is/are rejected. Claim(s) is/are objected to. Claim(s) are subject to restrict	e withdrawn from consideration						
Applicat	on Papers							
9)	The specification is objected to by the	Examiner.						
10)[	The drawing(s) filed on is/are:	a) ☐ accepted or b) ☐ objected	d to by the Examiner.					
	Applicant may not request that any object		•					
11)[	Replacement drawing sheet(s) including to The oath or declaration is objected to	·	= 1 1 1	• •				
Priority ι	ınder 35 U.S.C. § 119			-				
12) [ a)	Acknowledgment is made of a claim for All b) Some * c) None of:  1. Certified copies of the priority of the pr	documents have been received documents have been received of the priority documents have beal Bureau (PCT Rule 17.2(a)).	in Application No been received in this National Sta	ge				
Attachmen	t(s)							
2)  Notic 3)  Infon	e of References Cited (PTO-892) e of Draftsperson's Patent Drawing Review (PT mation Disclosure Statement(s) (PTO-1449 or F r No(s)/Mail Date	O-948) Papel	view Summary (PTO-413) r No(s)/Mail Date e of Informal Patent Application (PTO-15) ::	2)				

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### **DETAILED ACTION**

1. This application claims priority to provisional application 60/267,573 filed on 02/09/2001.

2. Claims 1-11 are pending in this case.

## Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-11 are rejected under 35 U.S.C. 102(e) as being anticipated by US 6,360,360 to Bates et al. (Bates).

The applied reference has a common Assignee with the instant application.

Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Regarding Claims 1, 5 and 9: Bates discloses a computer programmed method of minimizing the cost of using a component of a computer program (col. 6, lines 6-9 'Main'

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memory contains optimizing compiler'), said method comprising the steps of; providing said component with a plurality of explicit selectable alternative implementations (col. 6, lines 39-41 'multiple class definitions for objects') which share a common component interface and semantics (col. 8, lines 66-67 'class implementations with identical interfaces'), instrumenting said component to gather cost-related information during at least a partial run of said program (col. 8, lines 33-35 'inserting instrumentation code'), providing said component with a cost estimator for using said cost-related information to estimate a cost for using each of said explicitly selectable implementations in running said program (col. 8, lines 49-50 'compute a weighted cost for each class'), based on the estimated costs, selecting one of said explicitly selectable implementations for a subsequent at least partial run of said program (col. 6, lines 36-39 'automatically select among different implementations of objects').

Regarding Claims 2, 6 and 10: The rejections of claims 1, 5 and 9 are incorporated, respectively; further Bates discloses a default implementation is used during said at least partial run (col. 8, lines 11-15 'dynamic profiling data may be obtained by executing test code').

**Regarding Claim 3:** The rejection of claim 1 is incorporated; further Bates discloses the selecting step is carried out by another component operable as a controller (col. 6, lines 36-38 'a mechanism ... select among different implementations of objects').

**Regarding Claim 4:** The rejection of claim 1 is incorporated; further Bates discloses the selecting step is carried out by an application program (col. 6, lines 36-38 'allows the compiler to automatically select among different implementations of objects').

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**Regarding Claim 11:** The rejection of claim 9 is incorporated; further Bates discloses said selector being operable to choose an alternative implementation based upon a cost measurement by said instrumentation (col. 6, lines 36-38 'a mechanism ... to automatically select ... implementations of objects').

## Claim Rejections - 35 USC § 103

- 5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
  - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 6. Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,324,619 to Raverdy et al. (Raverdy) in view of US 5,752,038 to Blake et al. (Blake).

Regarding Claims 1, 5 and 9: Raverdy discloses a computer programmed method of minimizing the cost of using a component of a computer program (col. 4, lines 48-49 'steps executed on a computer system'), said method comprising the steps of; providing said component with a plurality of explicit selectable alternative implementations (col. 6, lines 14-15 'the adaptive method includes three implementations') which share a common component interface and semantics (col. 6, lines 19-21 'access to implementations are controlled by a switching software wrapper'); and selecting one of said explicitly selectable implementations for a subsequent at least partial run of said program (col. 6, lines 19-27 'asks the selector ... and executes the selected one of the implementations').

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Raverdy does not disclose instrumenting said component or estimating costs for using each of said explicitly selectable implementations, but does disclose an 'Adaptation Manager' which determines which implementation should be used (col. 6, lines 35-36 'an adaptation manager for managing such adaptive methods during run-time') based on designer supplied 'adaptation policies' (col. 11, lines 8-11 'adaptation policies are implemented by library designers').

Blake teaches instrumenting said component to gather cost-related information during at least a partial run of said program (col. 2, lines 45-47 'executes an instrumented version of the module') and a cost estimator for determining the cost of the application (col. 7, lines 47-49 'the optimizer program analyzes the execution data') in an analogous art for the purpose of optimizing the execution of the code (col. 2, lines 47-48 'to determine the optimal placement order for each code portion').

It would have been obvious to a person of ordinary skill in the art at the time of the invention to use Blake's instrumenting and analysis techniques (col. 2, lines 45-50) in combination with Raverdy's 'adaptation policies' (col. 11, lines 8-11) to cause the 'Adaptation Manager' (col. 6, lines 35-36) disclosed in Raverdy to select the implementations having lower estimated costs, because one of ordinary skill in the art would have been motivated to optimize the execution of the computer program (col. 2, lines 34-36 'the module will require less memory to execute').

Regarding Claims 2, 6 and 10: The rejections of claims 1, 5 and 9 are incorporated, respectively; further Raverdy discloses a default implementation is used during said at

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least partial run (col. 19, lines 64-65 'selects a first one of said plurality of first implementations by default').

**Regarding Claim 3:** The rejection of claim 1 is incorporated; further Raverdy discloses the selecting step is carried out by another component operable as a controller (col. 6, lines 22-27 'asks the selector which implementation it should execute').

**Regarding Claim 4:** The rejection of claim 1 is incorporated; further Raverdy discloses the selecting step is carried out by an application program (col. 6, lines 35-36 'an adaptation manager for managing such adaptive methods during run-time').

Regarding Claim 11: The rejection of claim 9 is incorporated; further Raverdy does not disclose said selector choosing an alternative implementation based upon said instrumentation, but does disclose an 'Adaptation Manager' which determines which implementation should be used (col. 6, lines 35-36 'an adaptation manager for managing such adaptive methods during run-time') based on designer supplied 'adaptation policies' (col. 11, lines 8-11 'adaptation policies are implemented by library designers').

Blake teaches said selector being operable to choose an alternative implementation based upon a cost measurement by said instrumentation (col. 7, lines 47-49 'the optimizer program ... determine an optimal placement order for each code portion') in an analogous art for the purpose of optimizing the execution of the code (col. 2, lines 47-48 'to determine the optimal placement').

It would have been obvious to a person of ordinary skill in the art at the time of the invention to use Blake's 'Optimizer Program' (col. 7, lines 47-49) in combination with

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Raverdy's 'adaptation policies' (col. 11, lines 8-11) to cause the 'Adaptation Manager' (col. 6, lines 35-36) disclosed in Raverdy to select the implementations having lower estimated costs, because one of ordinary skill in the art would have been motivated to optimize the execution of the computer program (col. 2, lines 34-36 'the module will require less memory to execute').

#### Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 5,862,386 to Joseph et al.; US 6,487,714 B1 to Azagury et al.; and 6,658,656 B1 to Thompson; 6,769,126 B1 to Pekowski.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Mitchell whose telephone number is 571-272-2728. The examiner can normally be reached on Monday through Thursday and every other Friday from 7:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on 571-272-3719. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Jason Mitchell 11/9/04 KAKALI CHAKI SUPERVISORY PATENT EXAMINER TECHNOLOGY CENTER 2100